1. A method of reducing the effects of multipath signal components associated with a received direct path signal comprising a carrier frequency that is modulated by a repetitive pseudo-random noise (PRN) code having M chips of code length, where M is a positive integer, comprising the steps of:

- demodulating the receive signal to obtain the PRN code;
- generating a replica code corresponding to the pseudo-random noise (PRN) code of the received signal;
- delaying the generated replica code for at least first, second and third different delay times equal in delay distance from each other, where each delay distance is less than one chip;
- further delaying the replica code for a fourth delay time equal to 1 chip from the second delay time and further delaying the replica code for a fifth delay time equal to more than one chip from the second delay time;
- correlating each delayed replica code with the demodulated PRN code so as to generate a correlation value for each delayed replica code;
- adjusting the start time of the replica code generator until the first and third delay time correlation values are substantially equal to each other and are greater than a predetermined value;
- determining if the correlation values for the fourth and fifth delay times are substantially equal to each other and if the fourth and fifth correlation values are not substantially equal to each other, adjusting the replica code generator so as to cause the fourth and fifth correlation values to be substantially equal to each other; and;
- considering the second delay time to be the start of the PRN code.

2. A method of reducing the effects of multipath signal components as defined in Claim 1, wherein the first delay time correlation value is called the late (L) correlation value, where the second delay time correlation value is called the prompt (P) correlation value, where the third delay time correlation value is called the early (E) correlation value, where the fourth delay time correlation value is called the E2 correlation value, and where the fifth delay time correlation value is called the E1 correlation value, and wherein the step of adjusting the start time of the replica code generator includes the step of adjusting the start time of the replica code generator until E - L - C1 is equal to a predetermined value, where C1 is a constant, and further wherein the step of determining if the correlation values of the fourth and fifth delay times are substantially equal is performed by determining if E2 - E1 > C2, where C2 is a constant, and if E2 - E1 > C2, then further adjusting the start time of the replica code generator until E2 - E1 - C2 is equal to a predetermined value.

3. A method of reducing the effects of multipath signal components as defined in Claim 2, wherein the value of constant C1 is in the range from 0.15 to 0.3.

4. A method of reducing the effects of multipath signal components as defined in Claim 3, wherein the value of constant C2 is in the range from 0 to 0.1.

5. A method of reducing the effects of multipath signal components as defined in Claim 4, wherein the E1 delay time is a delay of approximately -1.5 chips from the second delay time.

6. A system for reducing the effects of multipath signal components associated with a received direct path signal comprising a carrier signal that is modulated by a repetitive pseudo-random noise (PRN) code having M chips of code length, where M is a positive integer, comprising:

A) means for extracting the PRN code from the received signal;

B) a replica code generator for repetitively generating a replica code corresponding to the pseudo-random noise (PRN) code of the received signal;

C) a numerically controlled oscillator (NCO) for adjusting the start time and frequency of the replica code generator to generate the replica PRN code;

D) a plurality of delay modules in sequence with the replica code generator for delaying the generated replica code for at least first, second and third different delay times equal in delay distance from each other, where each delay distance is less than one chip and for delaying the replica code for a fourth delay time equal to 1 chip from the second delay time and further delaying the replica code for a fifth delay time equal to more than one chip from the second delay time;

E) a plurality of correlators each for receiving a replica code from the output of a different delay module and for receiving the PRN code from the received signal, each correlator generating a correlation value;

F) a code phase detector receiving the outputs of the plurality of correlators for generating an adjustment signal;

G) means, receiving the adjustment signal from the code phase detector, for filtering the adjustment signal and presenting the filtered adjustment signal to the NCO;

wherein the adjustment signal generated by the code phase detector causes an adjustment in the start time of the replica code generator until the first and third delay time correlation values are substantially equal to each other and are greater than a predetermined value and further wherein the code phase detector has means for determining if the correlation values for the fourth and fifth delay times are substantially equal to each other and if the fourth and fifth correlation values are not substantially equal to each other, causing the adjustment signal to adjust the replica code generator so as to cause the fourth and fifth correlation values to be substantially equal to each other, whereby the second delay time after said adjustments is considered to be the start of the received PRN code.

7. A system for reducing the effects of multipath signal components as defined in Claim 6, wherein the first delay time correlation value is called the late (L) correlation value, where the second delay time correlation value is called the prompt (P) correlation value, where the third delay time correlation value is called the early (E) correlation value, where the fourth delay time correlation value is called the E2 correlation value, and where the fifth delay time correlation value is called the E1 correlation value, and wherein the adjustment signal generated by the code phase detector includes means for generating an adjustment signal for adjusting the start time of the replica code generator until E - L - C1 is equal to a predetermined value, where C1 is a constant, and further wherein the code phase detector determines if the correlation values of the fourth and fifth delay times are substantially equal to each other and for causing the generation of an adjustment signal to cause the fourth and fifth correlation values to be substantially equal to each other is performed by said code phase detector having means for determining if E2 - E1 > C2, where C2 is a constant, and if E2 - E1 > C2, then further generating an adjustment signal to adjust the replica code generator until E2 - E1 - C2 is equal to a predetermined value.

8. A system for reducing the effects of multipath signal components as defined in Claim 7, wherein the value of constant C1 is in the range from 0.15 to 0.3.

9. A system for reducing the effects of multipath signal components as defined in Claim 8, wherein the value of constant C2 is in the range from 0 to 0.1.

10. A system of reducing the effects of multipath signal components as defined in Claim 9, wherein the E1 delay time is a delay of approximately -1.5 chips from the second delay time.

11. A device for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal, wherein each component and direct path signal is modulated by a repetitive pseudo-random noise (PRN) code having M chips of code length, where M is a positive integer, comprising:

A) a replica code generator for repetitively generating a replica code corresponding to the pseudo-random noise (PRN) code of the received signal;

B) a numerically controlled oscillator (NCO) for adjusting the start time and frequency of the replica code generator to generate the replica PRN code;

C) means for delaying the replica code a plurality of times having the same delay length between adjacent delayed replica codes;

D) means for correlating each delayed replica code with the overall received signal;

E) a code phase detector receiving the outputs of the correlating means for generating an adjustment signal and presenting said adjustment signal to the NCO so as to adjust the start time for the replica code generator;

wherein the adjustment signal generated by the code phase detector causes an adjustment in the start time of the replica code generator until the difference between two time correlation values are substantially equal to a first predetermined value provided that the difference between the correlation values for two other delay times are less than a second predetermined value, and if the difference between said two other correlation values is greater than said second predetermined value, causing an adjustment in the start time of the replica code generator until said difference between the correlation values of said two other delay times is less than said second predetermined value.

12. A device for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 11, wherein the means for delaying the replica code a plurality of times delays the replica code at least five times, wherein the first delay time correlation value is called the late (L) correlation value, where the second delay time correlation value is called the prompt (P) correlation value, where the third delay time correlation value is called the early (E) correlation value, where the fourth delay time correlation value is called the E2 correlation value, and where the fifth delay time correlation value is called the E1 correlation value, and wherein the adjustment signal generated by the code phase detector includes means for generating an adjustment signal for adjusting the start time of the replica code generator until E - L - C1 is equal to a predetermined value, where C1 is a constant, and further wherein the code phase detector determines if the correlation values of the fourth and fifth delay times are substantially equal to each other and for causing the generation of an adjustment signal to cause the fourth and fifth correlation values to be substantially equal to each other is performed by said code phase detector having means for determining if $E2 - E1 > C2$, where C2 is a constant, and if $E2 - E1 > C2$, then further generating an adjustment signal to adjust the replica code generator until E2 - E1 - C2 is equal to a predetermined value.

13. A system for reducing the effects of multipath signal components as defined in Claim 12, wherein the value of constant C1 is in the range from 0.15 to 0.3.

14. A system for reducing the effects of multipath signal components as defined in Claim 13, wherein the value of constant C2 is in the range from 0 to 0.1.

15. A system for reducing the effects of multipath signal components as defined in Claim 12, wherein the value of constant C2 is in the range from 0 to 0.1.

16. A device for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 12, wherein the means for delaying the replica code a plurality of times delays the replica code N times, and wherein the delay length between adjacent delayed replica codes is equal to $\frac{1}{2 \cdot fc}$, where fc is the chip frequency of the PRN code.

17. A device for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 11, wherein the means for delaying the replica code a plurality of times delays the replica code N times, and wherein the delay length between adjacent delayed replica codes is equal to $\frac{1}{2 \cdot fc}$, where fc is the chip frequency of the PRN code.

18. A method for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal, wherein each component and direct path signal is modulated by a repetitive pseudo-random noise (PRN) code having M chips of code length, where M is a positive integer, comprising the steps of:

- repetitively generating a replica code corresponding to the pseudo-random noise (PRN) code of the received signal;
- adjusting the start time and frequency of the replica code to generate the replica PRN code;
- delaying the replica code a plurality of times having the same delay length between adjacent delayed replica codes;
- correlating each delayed replica code with the overall received signal;
- receiving the outputs of the correlating step so as to generate an adjustment signal that adjusts the start time of the replica code;

wherein the adjustment signal causes an adjustment in the start time of the replica code until the difference between two time correlation values are substantially equal to a first predetermined value provided that the difference between the correlation values for two other delay times are less than a second predetermined value, and if the difference between said two other correlation values is greater than said second predetermined value, causing an adjustment in the start time of the replica code until said difference between the correlation values of said two other delay times is less than said second predetermined value.

19. A method for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 18, wherein the delaying of the replica code a plurality of times delays the replica code at least five times, wherein the first delay time correlation value is called the late (L) correlation value, where the second delay time correlation value is called the prompt (P) correlation value, where the third delay time correlation value is called the early (E) correlation value, where the fourth delay time correlation value is called the E2 correlation value, and where the fifth delay time correlation value is called the

E1 correlation value, and wherein the adjustment signal further adjusts the start time of the replica code until E - L - C1 is equal to a predetermined value, where C1 is a constant, and further determining if E2 - E1 > C2, where C2 is a constant, and if E2 - E1 > C2, then further generating an adjustment signal to adjust the replica code until E2 - E1 - C2 is equal to a predetermined value.

20. A method for reducing the effects of multipath signal components as defined in Claim 19, wherein the value of constant C1 is in the range from 0.15 to 0.3.

21. A method for reducing the effects of multipath signal components as defined in Claim 20, wherein the value of constant C2 is in the range from 0 to 0.1.

22. A method for reducing the effects of multipath signal components as defined in Claim 19, wherein the value of constant C2 is in the range from 0 to 0.1.

23. A method for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 19, wherein the step of delaying the replica code a plurality of times delays the replica code N times, and wherein the delay length between adjacent delayed replica codes is equal to $\frac{1}{2 \cdot fc}$, where fc is the chip frequency of the PRN code.

24. A method for reducing the effects of multipath signal components associated with a received direct path signal forming an overall received signal as defined in Claim 18, wherein the step of delaying the replica code a plurality of times delays the replica code N times, and wherein the delay length between adjacent delayed replica codes is equal to $\frac{1}{2 \cdot fc}$, where fc is the chip frequency of the PRN code.